Set Name side by side	Query	Hit Count	Set Name result set
DB =USPT;PGPB;JPAB;EPAB;DWPI;TDBD; THES= ASSIGNEE; PLUR= YES; OP= AND			
L6	L5 and ((HSV adj 1) adj gD)	2	L6
L5	L4 and ((heterologous adj signal) adj (peptide or sequence or leader))	13	L5
L4	L3 and ((RSV adj F) or (F adj protein))	152	L4
L3	L2 and (vector and vaccine)	828	L3
L2	((Respiratory adj syncytial) adj virus)	2549	L2
L1	Li-xiaomao.in.	12	L1

END OF SEARCH HISTORY

Expression of the fusion protein of human *respiratory* *syncytial* *virus* from recombinant vaccinia virus *vectors* and protection of vaccinated mice

Vaccinia virus (VV) recombinants were constructed that contained full-length cDNA copies of the fusion (*F*) *protein* gene of human respiratory syncytial (RS) virus. The *F* *protein* gene was placed next to the strong early-late VV 7.5 kilodalton promoter and was located within the VV thymidine kinase (tk) gene. Full...
...Finf 2, which were both glycosylated and of the same electrophoretic mobility as authentic Finf 1 and Finf 2. Immunofluorescence studies demonstrated that the mature *F* *protein* was transported to and expressed on the surface of recombinant VV-infected cells. Inoculation of rabbits with a recombinant *vector* expressing F resulted in the production of antiserum specific for the RS virus *F* *protein*. This antiserum neutralized virus infectivity and was capable of preventing fusion in RS virus-infected cells. Mice were vaccinated with recombinants expressing the *F* *protein*. At 3 weeks postinoculation, these animals had serum antibody against RS virus *F* *protein*. At 5 days after transnasal challenge with RS virus, the lungs of the mice previously vaccinated with recombinants expressing *F* *protein* were free of detectable RS virus, whereas the lungs of unvaccinated mice contained 10sup 4sup .sup 2 PFU of virus per g.
DRUG DESCRIPTORS:
*complementary dna; *inactivated virus *vaccine*; **vaccine*; *vaccinia *vaccine*
?ds

```
Set     Items   Description
S1        154   (RESPIRATORY (W) SYNCYTIAL (W) VIRUS) AND (VACCINE? AND VE-
            CTOR?)
S2          8   S1 AND REVIEW?
S3          6   RD (unique items)
S4         48   S1 AND ((RSV (W) F) OR (F (W) PROTEIN))
S5          1   S4 AND ((HETEROLOGOUS (W) SIGNAL) (W) (PEPTIDE OR SEQUENCE-
            ))
S6          0   S4 AND (HSV (W) GD)
S7          0   S4 AND (LEADER (W) (SEQUENCE OR PEPTIDE))
S8          0   RD (unique items)
S9         28   RD S4 (unique items)
S10        47   S4 NOT S3
S11        27   S9 NOT S3
?logoff
       14feb93 16:00:14 User259876 Session D465.2
            $2.79    0.668 DialUnits File155
               $2.73  13 Type(s) in Format  3
            $2.73  13 Types
     $5.51  Estimated cost File155
            $0.81    0.274 DialUnits File159
     $0.81  Estimated cost File159
            $6.41    1.144 DialUnits File5
              $22.75  13 Type(s) in Format  3
            $22.75  13 Types
    $29.16  Estimated cost File5
            $5.86    0.385 DialUnits File73
              $20.00  8 Type(s) in Format  3
            $20.00  8 Types
    $28.86  Estimated cost File73
            OneSearch, 4 files,  3.271 DialUnits FileOS
     $2.32  TELNET
    $66.66  Estimated cost this search
    $67.10  Estimated total session cost   3.369 DialUnits


### Status: Signed Off.  110 minutes
```

Status: Path 1 of [Dialog Information Services via Modem]

Status: Initializing TCP/IP using [UseTelnetProto 1 ServiceID pto-dialog]
Trying 3106000009999...Open

DIALOG INFORMATION SERVICES
PLEASE LOGON:
 ******** HHHHHHHH SSSSSSS?
Status: Signing onto Dialog
 ****
ENTER PASSWORD:
 ******** HHHHHHHH SSSSSSS? ********
Welcome to DIALOG
Status: Connected

Dialog level 02.12.60D

Last logoff: 13feb03 16:20:55
Logon file001 14feb03 15:50:46
*** ANNOUNCEMENT ***
***
--File 515 D&B Dun's Electronic Business Directory is now online
completely updated and redesigned. For details, see HELP NEWS 515.
***
--File 990 - NewsRoom now contains October 2002 to present records.
File 993 - NewsRoom archive contains 2002 records from January 2002-
September 2002. To search all 2002 records, BEGIN 990,993 or B NEWS2002
***
--Alerts have been enhanced to allow a single Alert profile to be
stored and run against multiple files. Duplicate removal is available
across files and for up to 12 months. The Alert may be run according
to the file's update frequency or according to a custom
calendar-based schedule. There are no additional prices for these
enhanced features. See HELP ALERT for more information.
***
--U.S. Patents Fulltext (File 654) has been redesigned with
new search and display features. See HELP NEWS 654 for
information.
***
--Connect Time joins DialUnits as pricing options on Dialog.
See HELP CONNECT for information.
***
--CLAIMS/US Patents (Files 340,341, 942) have been enhanced
with both application and grant publication level in a
single record. See HELP NEWS 340 for information.
***
--SourceOne patents are now delivered to your email inbox
as PDF replacing TIFF delivery. See HELP SOURCE1 for more
information.
***
--Important news for public and academic
libraries. See HELP LIBRARY for more information.
***
--Important Notice to Freelance Authors--
See HELP FREELANCE for more information
***
For information about the access to file 43 please see Help News43.
***
NEW FILES RELEASED
***Dialog NewsRoom - Current 3-4 months (File 990)
***Dialog NewsRoom - 2002 Archive (File 993)
***Dialog NewsRoom - 2001 Archive (File 994)
***Dialog NewsRoom - 2000 Archive (File 995)
***TRADEMARKSCAN-Finland (File 679)

```
***TRADEMARKSCAN-Norway (File 678)
***TRADEMARKSCAN-Sweden (File 675)
                    ***
UPDATING RESUMED
***Delphes European Business (File 481)
                    ***
RELOADED
***D&B Dun's Electronic Business Directory (File 515)
***U.S. Patents Fulltext 1976-current (File 654)
***Population Demographics (File 581)
***Kompass Western Europe (File 590)
***D&B - Dun's Market Identifiers (File 516)

REMOVED
***Chicago Tribune (File 632)
***Fort Lauderdale Sun Sentinel (File 497)
***The Orlando Sentinel (File 785)
***Newport News Daily Press (File 747)
***U.S. Patents Fulltext 1980-1989 (File 653)
***Washington Post (File 146)
***Books in Print (File 470)
***Court Filings (File 793)
***Publishers, Distributors & Wholesalers of the U.S. (File 450)
***State Tax Today (File 791)
***Tax Notes Today (File 790)
***Worldwide Tax Daily (File 792)

***TOXNET data is added to ToxFile (F156)

***New document supplier***
IMED has been changed to INFOTRIE (see HELP OINFOTRI)


     >>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
     >>>    of new databases, price changes, etc.      <<<
                    ****
KWIC is set to 50.
HILIGHT set on as '*'
* *  New CURRENT Year ranges installed    **

File   1:ERIC  1966-2003/Jan 22
       (c) format only 2003 The Dialog Corporation

      Set  Items  Description
      ---  -----  -----------
Cost is in DialUnits
?b 155, 159, 5, 73
       14feb03 15:51:12 User259876 Session D465.1
            $0.34    0.098 DialUnits File1
     $0.34  Estimated cost File1
     $0.10  TELNET
     $0.44  Estimated cost this search
     $0.44  Estimated total session cost   0.098 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R)  1966-2003/Feb W2
        (c) format only 2003 The Dialog Corp.
  File 159:Cancerlit  1975-2002/Oct
        (c) format only 2002 Dialog Corporation
*File 159: Updating for Cancerlit has stopped due to end of year
processing.
  File   5:Biosis Previews(R)  1969-2003/Feb W2
        (c) 2003 BIOSIS
*File   5: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
```

File 73:EMBASE 1974-[redacted]3/Feb W2
(c) 2003 Elsevier Science B.V.
***File 73: Alert feature enhanced for multiple files, duplicates** removal, customized scheduling. See HELP ALERT.

Set	Items	Description
?s (respiratory (w) syncytial (w) virus) and (vaccine? and vector?)		
	379623	RESPIRATORY
	21609	SYNCYTIAL
	1281173	VIRUS
	14491	RESPIRATORY(W)SYNCYTIAL(W)VIRUS
	278768	VACCINE?
	294590	VECTOR?
S1	154	(RESPIRATORY (W) SYNCYTIAL (W) VIRUS) AND (VACCINE? AND VECTOR?)
?s s1 and review?		
	154	S1
	1821591	REVIEW?
S2	8	S1 AND REVIEW?
?rd		
...completed examining records		
S3	6	RD (unique items)

?t s3/3,k/all

3/3,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

08169404 94303327 PMID: 8030364

An update on approaches to the development of *respiratory* *syncytial* *virus* (RSV) and parainfluenza virus type 3 (PIV3) *vaccines*.

Murphy B R; Hall S L; Kulkarni A B; Crowe J E; Collins P L; Connors M; Karron R A; Chanock R M

Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD.

Virus research (NETHERLANDS) Apr 1994, 32 (1) p13-36, ISSN 0168-1702 Journal Code: 8410979

Document type: Journal Article; Review; Review, Academic

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

An update on approaches to the development of *respiratory* *syncytial* *virus* (RSV) and parainfluenza virus type 3 (PIV3) *vaccines*.

... for about 30% of severe viral respiratory tract disease leading to hospitalization of infants and children. For this reason, there is a need to develop *vaccines* effective against these viruses. Since these viruses cause severe disease in early infancy, *vaccines* must be effective in the presence of maternal antibody. Currently, several strategies for immunization against these viruses are being explored including peptide *vaccines*, subunit *vaccines*, *vectored* *vaccines* (e.g., vaccinia-RSV or adenovirus-RSV recombinants), and live attenuated virus *vaccines*. The current status of these approaches is *reviewed* . In addition, the immunologic basis for the disease potentiation seen in *vaccinees* immunized with formalin-inactivated RSV during subsequent RSV infection is *reviewed* . The efficacy of immunization in the presence of maternal antibody is discussed. Much progress for a RSV and PIV3 *vaccine* has been made and successful immunization against each of these pathogens should be achieved within this decade.

Descriptors: Influenza *Vaccine*; *Parainfluenza Virus 3, Human --immunology--IM; *Respiratory Syncytial Viruses--immunology--IM; *Viral *Vaccines*...; IM; Antibodies, Viral--biosynthesis--BI; Antibodies, Viral --immunology--IM; Clinical Trials; Hesperomyinae; ISCOMs; Immunity, Maternally-Acquired; Infant; Infant, Newborn; Influenza--prevention and control--PC; Influenza *Vaccine*--immunology--IM; Influenza *Vaccine*

--toxicity--TO; Mice; [redacted]an troglodytes; Peptide Fr[redacted]ents --chemical synthesis--CS; Peptide Fragments--immunology--IM; *Respiratory* *Syncytial* *Virus* Infections--prevention and control--PC; Vaccination; *Vaccines*, Attenuated; *Vaccines*, Synthetic; Viral *Vaccines*--immunology --IM; Viral *Vaccines*--toxicity--TO

Chemical Name: Antibodies, Anti-Idiotypic; Antibodies, Viral; ISCOMs; Influenza *Vaccine*; Peptide Fragments; *Vaccines*, Attenuated; *Vaccines*, Synthetic; Viral *Vaccines*

3/3,K/2 (Item 1 from file: 73)

11338909 EMBASE No: 2001350392

***Respiratory* *syncytial* *virus* *vaccine* development**

Crowe J.E. Jr.
J.E. Crowe Jr., Departments of Pediatrics, Vanderbilt University Medical Center, D-7235 Medical Center North, 1161 21st Avenue South, Nashville, TN 37232-2581 United States
AUTHOR EMAIL: james.crowe@vanderbilt.edu

Vaccine (VACCINE (United Kingdom) 15 OCT 2001, 20/SUPPL. 1 (S32-S37)
CODEN: VACCD ISSN: 0264-410X
PUBLISHER ITEM IDENTIFIER: S0264410X01002870
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 57

***Respiratory* *syncytial* *virus* *vaccine* development**

Development of an RSV *vaccine* for infants has been hindered by the lack of an ideal animal model that exhibits disease, and the challenge of effectively immunizing very young infants who are immunologically immature. Nevertheless, significant progress has been made recently in developing live attenuated viruses and protein subunit *vaccine* candidates. Numerous *vaccine* candidates are currently in early clinical trials. This paper *reviews* the significant obstacles to development of RSV *vaccines*, and the progress made to date. (c) 2001 Elsevier Science Ltd. All rights reserved.

DRUG DESCRIPTORS:
**respiratory* *syncytial* *virus* *vaccine*--clinical trial--ct; * *respiratory* *syncytial* *virus* *vaccine*--drug development--dv; * *respiratory* *syncytial* *virus* *vaccine*--drug therapy--dt
protein subunit--endogenous compound--ec; virus protein--endogenous compound--ec; formaldehyde--clinical trial--ct; formaldehyde--drug development--dv; formaldehyde--drug therapy--dt; inactivated *vaccine* --clinical trial--ct; inactivated *vaccine*--drug development--dv; inactivated *vaccine*--drug therapy--dt; live *vaccine*--clinical trial--ct ; live *vaccine*--drug development--dv; live *vaccine*--drug therapy--dt; DNA *vaccine*--drug therapy--dt

MEDICAL DESCRIPTORS:
Respiratory syncytial pneumovirus; immunization; infection prevention; immaturity; virus attenuation; immunity; virus *vector*; RNA virus infection; human; nonhuman; clinical trial; infant; article; priority journal

3/3,K/3 (Item 2 from file: 73)

11281281 EMBASE No: 2001294714

Nasal delivery of epitope based *vaccines*

Olszewska W.; Steward M.W.
M.W. Steward, Department of Infectious Diseases, London Sch. of Hyg. and Trop. Med., Keppel Street, London WC1E 7HT United Kingdom

AUTHOR EMAIL: michael.[redacted]ward@lshtm.ac.uk
Advanced Drug Delivery Reviews (ADV. DRUG DELIV. REV.) (Netherlands)
23 SEP 2001, 51/1-3 (161-171)
CODEN: ADDRE ISSN: 0169-409X
PUBLISHER ITEM IDENTIFIER: S0169409X01001648
DOCUMENT TYPE: Journal ; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 57

Nasal delivery of epitope based *vaccines*

Essentially all of the currently available *vaccines* are based on the use of inactivated or live-attenuated pathogens. However, these *vaccines* have several shortcomings, such as difficulties of in vitro culturing, biohazard risks, as well as loss of efficacy due to the genetic variations seen in many viruses. These problems may potentially be solved by immunising with epitope-based *vaccines* consisting of rationally designed protective epitopes, appropriately presented and easy to deliver, which are capable of stimulating effective B-cell, T-cell and cytotoxic immune...

...broad range immune response which has the potential to overcome both strain specificity of the pathogen and the MHC restriction of the host. Epitope-based *vaccines* can be designed to involve the use of synthetic materials that can be available in unlimited quantities and posing no biohazard. Other approaches include the use of naked DNA or recombinant viruses or bacteria expressing the epitopes. An important objective in the development of such *vaccines* is that they should be effective when delivered via the mucosal route and effective in the presence of maternal antibodies. In this *review*, we present examples of the use of various epitope-based *vaccine* constructs, focussing particularly upon their intranasal delivery to the immune system. (c) 2001 Elsevier Science B.V. All rights reserved.
DRUG DESCRIPTORS:
*virus *vaccine*--drug therapy--dt; *virus *vaccine*--pharmaceutics--pr; *virus *vaccine*--pharmacology--pd; *virus *vaccine*--intranasal drug administration--na; *epitope--drug therapy--dt; *epitope--pharmaceutics--pr; *epitope--pharmacology--pd; *epitope--intranasal drug administration--na
MEDICAL DESCRIPTORS:
immunization; cellular immunity; health hazard; virus recombinant; mucosa; cell mediated cytotoxicity; T lymphocyte; B lymphocyte; antibody response; cell proliferation; spleen cell; virus load; immunogenicity; virus *vector*; Mosaic virus; nonhuman; *review*; priority journal
...DRUG TERMS (UNCONTROLLED): drug administration--na; heat labile toxin --pharmaceutics--pr; nucleoprotein f np9--pharmaceutics--pr; nucleoprotein f np9--pharmacology--pd; nucleoprotein f np9--intranasal drug administration--na; *respiratory* *syncytial* *virus* protein --pharmaceutics--pr; *respiratory* *syncytial* *virus* protein --pharmacology--pd; *respiratory* *syncytial* *virus* protein--intranasal drug administration--na

3/3,K/4 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

10919843 EMBASE No: 2000415953
Current approaches to the development of *vaccines* against RSV
AKTUELLE ANSATZE ZUR IMPFSTOFFENTWICKLUNG GEGEN *RESPIRATORY*-*SYNCYTIAL*-*VIRUS* (RSV)
Weltkamp J.-H.; Crowe J.E. Jr.
Dr. J.-H. Weltkamp, Vanderbilt University, Nashville, TN United States
Monatsschrift fur Kinderheilkunde (MONATSSCHR. KINDERHEILKD.) (Germany)
2000, 148/11 (980-989)
CODEN: MOKIA ISSN: 0026-9298
DOCUMENT TYPE: Journal; Review
LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH; GERMAN

NUMBER OF REFERENCES: 1

Current approaches to the development of *vaccines* against RSV
AKTUELLE ANSATZE ZUR IMPFSTOFFENTWICKLUNG GEGEN *RESPIRATORY*-*SYNCYTIAL*-*VIRUS* (RSV)

Background. *Respiratory* *syncytial* *virus* (RSV) is the most common viral agent of severe lower respiratory tract disease in infants and children throughout the world. Highest hospitalization rates are seen... ...in Germany for selected high-risk infants. The goal of vaccination against RSV is to prevent serious virus-associated lower respiratory tract illness. Development of *vaccine*. The development of a successful RSV *vaccine* faces numerous obstacles that are discussed in the article. Candidate *vaccine* strategies explored to date include live attenuated RSV, RSV proteins, live virus *vectors* and DNA *vaccines*. We describe milestones in RSV *vaccine* development and the current status of promising *vaccine* candidates.
DRUG DESCRIPTORS:
**respiratory* *syncytial* *virus* *vaccine*
MEDICAL DESCRIPTORS:
prematurity; lung dysplasia; risk factor; chronic lung disease; cystic fibrosis; vaccination; human; *review*

3/3,K/5 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE
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07374357 EMBASE No: 1998277673
Respiratory* *syncytial* *virus* *vaccines
Dudas R.A.; Karron R.A.
R.A. Karron, Center for Immunization Research, Johns Hopkins University, School of Hygiene and Public Health, 624 N. Broadway, Baltimore, MD 21205 United States
AUTHOR EMAIL: rkarron@jhsph.edu
Clinical Microbiology Reviews : CLIN. MICROBIOL. REV.) (United States 1998, 11/3 (430-439)
CODEN: CMIPE ISSN: 0893-8512
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 126

Respiratory* *syncytial* *virus* *vaccines

Respiratory, *syncytial* *virus* (RSV) is the most important cause of viral lower respiratory tract illness (LRI) in infants and children worldwide and causes significant LRI in the elderly...

...in immunocompromised patients. The goal of RSV vaccination is to prevent serious RSV-associated LRI. There are several obstacles to the development of successful RSV *vaccines*, including the need to immunize very young infants, who may respond inadequately to vaccination; the existence of two antigenically distinct RSV groups, A and B; and the history of disease enhancement following administration of a formalin-inactivated *vaccine*. It is likely that more than one type of *vaccine* will be needed to prevent RSV LRI in the various populations at risk. Although *vector* delivery systems, synthetic peptide, and immune-stimulating complex *vaccines* have been evaluated in animal models, only the purified F protein (PFP) subunit *vaccines* and live attenuated *vaccines* have been evaluated in recent clinical trials. PFP-2 appears to be a promising *vaccine* for the elderly, and for RSV-seropositive children with underlying pulmonary disease, whereas live cold-passaged (cp), temperature-sensitive (ts) RSV *vaccines* (denoted cpts *vaccines*) would most probably be useful in young infants. The availability of cDNA technology should allow further refinement of existing live attenuated cpts candidate *vaccines* to produce engineered *vaccines* that are satisfactorily attenuated, immunogenic, and

phenotypically stable.
DRUG DESCRIPTORS:
**respiratory* *syncytial* *virus* *vaccine*--drug development--dv; *
respiratory *syncytial* *virus* *vaccine*--drug therapy--dt
live *vaccine*--drug development--dv; live *vaccine*--drug therapy--dt;
formaldehyde
MEDICAL DESCRIPTORS:
virus morphology; genetic engineering; lower respiratory tract infection
--drug therapy--dt; lower respiratory tract infection--prevention--pc;
immune deficiency; virus *vector*; virus classification; virus immunity;
human; newborn; adolescent; aged; infant; child; adult; clinical trial;
review

3/3,K/6 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE
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03872500 EMBASE No: 1989041455
Nosocomial viral infections: Recent developments and new strategies
Goldmann D.A.
Infection Control Program, Children's Hospital, Department of Pediatrics, Harvard Medical School, Boston, MA 02115 United States
European Journal of Clinical Microbiology and Infectious Diseases (EUR. J. CLIN. MICROBIOL. INFECT. DIS.) (Germany) 1989, 8/1 (75-81)
CODEN: EJCDE ISSN: 0722-2211
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...viral respiratory pathogens and has led to increased understanding of the epidemiology of these organisms in the hospital. These advances are exemplified by studies of *respiratory* *syncytial* *virus* infections in hospitalized children. The pulmonary sequelae of RSV infection are particularly serious in neonates and in children with underlying cardiopulmonary disease or immunodeficiency. Virus...

...infected patients or with contaminated objects in the patients' environment. Personnel may infect themselves by rubbing their eyes or nose with contaminated hands, thus becoming *vectors* in the transmission of RSV to patients under their care. Compliance with contact precautions, which requires the use of gloves and gown, dramatically reduces the...
DRUG DESCRIPTORS:
vaccine
MEDICAL DESCRIPTORS:
drug efficacy; hospitalization; immune deficiency; immune response; infant; infection control; infection risk; respiratory tract infection; seasonal variation; virus transmission; *review*; human
?ds

Set	Items	Description
S1	154	(RESPIRATORY (W) SYNCYTIAL (W) VIRUS) AND (VACCINE? AND VECTOR?)
S2	8	S1 AND REVIEW?
S3	6	RD (unique items)

?s s1 and ((RSV (w) F) or (F (w) protein))

	154	S1
	13661	RSV
	419531	F
	324	RSV(W)F
	419531	F
	3751129	PROTEIN
	2296	F (W) PROTEIN
S4	43	S1 AND ((RSV (W) F) OR (F (W) PROTEIN))

?s s4 and (heterologous (w) signal? (w) (peptide or sequence))

	43	S4
	95822	HETEROLOGOUS

```
          633431  SIGNAL
          679060  PEPTIDE
         1486556  SEQUENCE
               45  HETEROLOGOUS(W)SIGNAL(W)(PEPTIDE OR SEQUENCE)
      S5        1  S4 AND ((HETEROLOGOUS (W) SIGNAL) (W) (PEPTIDE OR
                   SEQUENCE))
?t s5/3,k/all

 5/3,K/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

12951619   BIOSIS NO.: 200100158768
Nucleic acid *respiratory* *syncytial* *virus* *vaccines*.
AUTHOR: Li Xiaomao(a); Ewasyshyn Mary E; Sambhara Suryaprakash; Klein
  Michel H
AUTHOR ADDRESS: (a)Toronto**Canada
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents  1236 (1):pNo Pagination July 4, 2000
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

Nucleic acid *respiratory* *syncytial* *virus* *vaccines*.

ABSTRACT: Non-replicating *vectors* containing a nucleotide sequence coding
  for an *F* *protein* of *respiratory* *syncytial* *virus* (RSV) and a
  promoter for such sequence, preferably a cytomegalovirus promoter, are
  described for in vivo immunization. The nucleotide sequence encoding the
  *RSV* *F* *protein* may lack a sequence encoding the homologous signal
  peptide but possessing a *heterologous* *signal* *peptide* enhancing
  *RSV* *F* *protein* expression. Such non-replicating *vectors*, including
  plasmids, also may contain a further nucleotide sequence located adjacent
  to the *RSV* *F* *protein* encoding sequence to enhance the
  immunoprotective ability of the *RSV* *F* *protein* when expressed in
  vivo. Such non-replicating *vectors* may be used to immunize a host
  against disease caused by infection with RSV, including a human host, by
  administration thereto, and may be formulated as immunogenic compositions
  with pharmaceutically-acceptable carriers for such purpose. Such
  *vectors* also may be used to produce antibodies for detection of RSV
  infection in a sample.
DESCRIPTORS:
  ORGANISMS: *respiratory* *syncytial* *virus* (RSV) (Paramyxoviridae...
  CHEMICALS & BIOCHEMICALS:   *RSV* *F* *protein*--...

...RSV *vaccine*--*vaccine*;
?ds

Set     Items   Description
S1        154   (RESPIRATORY (W) SYNCYTIAL (W) VIRUS) AND (VACCINE? AND VE-
             CTOR?)
S2          8   S1 AND REVIEW?
S3          6   RD (unique items)
S4         49   S1 AND ((RSV (W) F) OR (F (W) PROTEIN))
S5          1   S4 AND ((HETEROLOGOUS (W) SIGNAL) (W) (PEPTIDE OR SEQUENCE-
               ))
?s s4 and  HSV (w) gD)
              49  S4
           39671  HSV
          257305  GD
              99  HSV(W)GD
      S6       0  S4 AND (HSV (W) GD)
?s s4 and  leader (w) sequence or peptide
              49  S4
```

```
          22738  LEADER
        1486556  SEQUENCE
         679060  PEPTIDE
           9022  LEADER(W)(SEQUENCE OR PEPTIDE)
      S7       0  S4 AND (LEADER (W) (SEQUENCE OR PEPTIDE))
?rd
>>>Set  has no items to process.
...completed examining records
      S8       0  RD (unique items)
?rd s4
...completed examining records
      S9      29  RD S4 (unique items)
?s s4 not s3
              44  S4
               6  S3
     S10      47  S4 NOT S3
?s s9 not s3
              36  S9
               6  S3
     S11      27  S9 NOT S3
?t s11/3,k/all
```

11/3,K/1 (Item 1 from file: 155)

13095115 21445624 PMID: 11561730

Immune induction and modulation in mice following immunization with DNA encoding *F* *protein* of *respiratory* *syncytial* *virus*.

Park E K; Soh B Y; Jang Y S; Park J H; Chung G H
Faculty of Biological Sciences, College of Natural Sciences, Chonbuk National University, Chonju, Korea.

Molecules and cells (Korea (South)) Aug 31 2001, 12 (1) p50-6, ISSN 1016-8478 Journal Code: 9610936
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Immune induction and modulation in mice following immunization with DNA encoding *F* *protein* of *respiratory* *syncytial* *virus*.

Respiratory *syncytial* *virus* (RSV) is one of the principal agents of bronchiolitis and pneumonia in young children. Thus, there is a strong need to make a safe and effective *vaccine* against the RSV infection. DNA immunization is very effective at inducing both cellular and humoral immune responses. In this study, we inserted the *RSV*-*F* gene into expression *vectors* , pcDNA3.1 and pQE. These constructs were transformed into C2C12 and E. coli M15 cells, respectively. The expression of the *RSV*-*F* *protein* was confirmed by SDS-PAGE, followed by Western blot analyses. The immunization of pcDNA3.1-*RSV*-*F* elicited both anti-*RSV*-*F* titer in mouse sera and CTL activities with mouse splenocytes. Especially, the co-administration of IL-4, or the GM-CSF gene with the *RSV*-*F* gene construct, enhanced the production of anti-*RSV*-*F* Ab. However, this enhancement disappeared by the simultaneous injection of the Th1 and Th2 type cytokine genes. The CTL activities were affected by the co...

Descriptors: *Respiratory* *Syncytial* *Virus* *Vaccines*--immunology--IM ; **Respiratory* *Syncytial* *Virus*, Human--genetics--GE; **Respiratory* *Syncytial* *Virus*, Human--immunology--IM; **Vaccines*, DNA--immunology --IM; *Viral Proteins--immunology--IM...; metabolism--ME; Interleukin-4 --genetics--GE; Interleukin-4--metabolism--ME; Mice; Mice, Inbred BALB C; Microscopy, Electron, Scanning; Plasmids--genetics--GE; Plasmids --metabolism--ME; Vaccination; *Vaccines*, DNA--pharmacology--PD; Viral Proteins--genetics--GE
Chemical Name: Plasmids; *Respiratory* *Syncytial* *Virus* *Vaccines*; *Vaccines*, DNA; Viral Proteins; *respiratory* *syncytial* *virus* proteins ; Interleukin-4; Interferon Type II; Granulocyte-Macrophage

11/3,K/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)
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12831091 21655488 PMID: 11773385

Mucosal immunization of rhesus monkeys against *respiratory* *syncytial* *virus* subgroups A and B and human parainfluenza virus type 3 by using a live cDNA-derived *vaccine* based on a host range-attenuated bovine parainfluenza virus type 3 *vector* backbone.

Schmidt Alexander C; Wenzke Daniel R; McAuliffe Josephine M; St Claire Marisa; Elkins William R; Murphy Brian R; Collins Peter L
Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892, USA. aschmidt@niaid.nih.gov

Journal of virology (United States) Feb 2002, 76 (3) p1089-99, ISSN 0022-538X Journal Code: 0113724
Contract/Grant No.: AI-000080; AI; NIAID; AI-000097; AI; NIAID
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Mucosal immunization of rhesus monkeys against *respiratory* *syncytial* *virus* subgroups A and B and human parainfluenza virus type 3 by using a live cDNA-derived *vaccine* based on a host range-attenuated bovine parainfluenza virus type 3 *vector* backbone.

Reverse genetics was used to develop a two-component, trivalent live attenuated *vaccine* against human parainfluenza virus type 3 (HPIV3) and *respiratory* *syncytial* *virus* (RSV) subgroups A and B. The backbone for each of the two components of this *vaccine* was the attenuated recombinant bovine/human PIV3 (rB/HPIV3), a recombinant BPIV3 in which the bovine HN and F protective antigens are replaced by their...

... induced by infection with wild-type RSV, and HPIV3-specific antibody responses were similar to, or slightly less than, after infection with the rB/HPIV3 *vector* itself. This study describes a novel *vaccine* strategy against RSV in which *vaccine* viruses with a common attenuated backbone, specifically rB/HPIV3 derivatives expressing the G and/or F major protective antigens of RSV subgroup A and of...

Descriptors: Genetic *Vectors*; *Parainfluenza *Vaccines*--immunology--IM; *Parainfluenza Virus 3, Bovine; *Parainfluenza Virus 3, Human--immunology--IM; **Respiratory* *Syncytial* *Virus* Infections--immunology--IM; **Respiratory* *Syncytial* *Virus* *Vaccines*--immunology--IM; *Respiratory Syncytial Viruses--immunology--IM; *Respirovirus Infections--immunology--IM; **Vaccines*, DNA--immunology--IM...; Antibodies, Viral--immunology--IM; Antigens, Viral--genetics--GE; Antigens, Viral--immunology--IM; Base Sequence; Cattle; Cell Line; Cercopithecus aethiops; DNA, Viral; Disease Models, Animal; Genetic *Vectors*--genetics--GE; Genetic *Vectors*--physiology--PH; Genome, Viral; HN Protein--genetics--GE; HN Protein--immunology--IM; Immunity, Mucosal--immunology--IM; Macaca mulatta; Molecular Sequence Data; Mutagenesis, Insertional--methods--MT; Open Reading Frames; Parainfluenza *Vaccines*--genetics--GE; Parainfluenza Virus 3, Bovine--genetics--GE; Parainfluenza Virus 3, Bovine--physiology--PH; Parainfluenza Virus 3, Human--genetics--GE; *Respiratory* *Syncytial* *Virus* Infections--prevention and control--PC; *Respiratory* *Syncytial* *Virus* *Vaccines*--genetics--GE; Respiratory Syncytial Viruses--genetics--GE; Respirovirus Infections--prevention and control--PC; Transcription, Genetic; Tumor Cells, Cultured; Vaccination; *Vaccines*, Attenuated--genetics--GE; *Vaccines*, Attenuated--immunology--IM; *Vaccines*, DNA--genetics--GE; Vero Cells; Viral Fusion Proteins--genetics--GE; Viral Fusion Proteins--immunology--IM; Viral Proteins--genetics--GE; Viral Proteins--immunology--IM; Virus Replication
Chemical Name: Antibodies, Viral; Antigens, Viral; DNA, Viral; Genetic

Vectors; HN Protein; [redacted]ainfluenza *Vaccines*; *Respir[redacted]ry* *Syncytial* *Virus* *Vaccines*; *Vaccines*, Attenuated; *Vaccines*, DNA; Viral Fusion Proteins; Viral Proteins; *respiratory* *syncytial* *virus* proteins; *F* *protein*, parainfluenza virus 3

11/3,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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11198671 21211609 PMID: 11312329

Recombinant bovine/human parainfluenza virus type 3 (B/HPIV3) expressing the *respiratory* *syncytial* *virus* (RSV) G and F proteins can be used to achieve simultaneous mucosal immunization against RSV and HPIV3.

Schmidt A C; McAuliffe J M; Murphy B R; Collins P L
Laboratory of Infectious Disease, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892, USA. aschmidt@niaid.nih.gov

Journal of virology (United States) May 2001, 75 (10) p4594-603, ISSN 0022-538X Journal Code: 0113724
Contract/Grant No.: AI-000030; AI; NIAID; AI-000087; AI; NIAID
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Recombinant bovine/human parainfluenza virus type 3 (B/HPIV3) expressing the *respiratory* *syncytial* *virus* (RSV) G and F proteins can be used to achieve simultaneous mucosal immunization against RSV and HPIV3.

... bovine PIV3 (rBPIV3) in which the F and HN genes were replaced with their HPIV3 counterparts, was used to express the major protective antigens of *respiratory* *syncytial* *virus* (RSV) in order to create a bivalent mucosal *vaccine* against RSV and HPIV3. The attenuation of rB/HPIV3 is provided by the host range restriction of the BPIV3 backbone in primates. RSV G and...

... gene. The recombinant PIV3 expressing the RSV G ORF (rB/HPIV3-G1) was not restricted in its replication in vitro, whereas the virus expressing the *RSV* *F* ORF (rB/HPIV3-F1) was eightfold restricted compared to its rB/HPIV3 parent. Both viruses replicated efficiently in the respiratory tract of hamsters, and each...

... a combination of both viruses resulted in a high level of resistance to challenge with RSV or HPIV3 28 days later. These results describe a *vaccine* strategy that obviates the technical challenges associated with a live attenuated RSV *vaccine* , providing, against the two leading viral agents of pediatric respiratory tract disease, a bivalent *vaccine* whose attenuation phenotype is based on the extensive host range sequence differences of BPIV3.

Descriptors: Antigens, Viral--immunology--IM; *Genetic *Vectors* --immunology--IM; *Parainfluenza *Vaccines*--immunology--IM; *Parainfluenza Virus 3, Human--immunology--IM; **Respiratory* *Syncytial* *Virus* Infections--prevention and control--PC; **Respiratory* *Syncytial* *Virus* *Vaccines*--immunology--IM; **Respiratory* *Syncytial* *Virus*, Human --immunology--IM; *Respirovirus--immunology--IM; *Respirovirus Infections --prevention and control--PC; **Vaccines*, Synthetic--immunology--IM; *Viral Envelope Proteins--immunology--IM; *Viral Fusion Proteins --immunology--IM; *Viral Proteins--immunology--IM; Antibodies, Viral --biosynthesis--BI; Antibodies, Viral--blood--BL; Antigens, Viral --genetics--GE; Base Sequence; Cattle; Cell Line; DNA, Viral; Gene Expression; Genetic *Vectors*--genetics--GE; Genetic *Vectors*--physiology --PH; Hamsters; Immunity, Mucosal; Macaca mulatta; Molecular Sequence Data; Mutagenesis, Insertional; Open Reading Frames; Parainfluenza *Vaccines* --genetics--GE; Parainfluenza Virus 3, Human--genetics--GE; Recombination, Genetic; Respiratory System--metabolism--ME; Respirovirus--genetics--GE; Respirovirus--physiology--PH; Tumor Cells, Cultured; Vaccination;

Vaccines, Synthetic--g[redacted]tics--GE; Viral Envelope Prote[redacted]--genetics--GE; Viral Fusion Proteins--genetics--GE; Viral Proteins--genetics--GE; Virus Replication

Chemical Name: Antibodies, Viral; Antigens, Viral; DNA, Viral; Genetic *Vectors*; Parainfluenza *Vaccines*; *Respiratory* *Syncytial* *Virus* *Vaccines*; *Vaccines*, Synthetic; Viral Envelope Proteins; Viral Fusion Proteins; Viral Proteins; *respiratory* *syncytial* *virus* proteins

11/3,K/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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11158222 21176369 PMID: 11277694

Membrane-associated *respiratory* *syncytial* *virus* *F* *protein* expressed from a human rhinovirus type 14 *vector* is immunogenic.

Bollenmaier G; Mosier S M; Scholle F; Sharma N; McKnight K L; Lemon S M

Department of Microbiology and Immunology, The University of Texas Medical Branch at Galveston, 301 University Boulevard, 4.112 MRB, Galveston, Texas 77555-1019, USA.

Virology (United States) Mar 15 2001, 281 (2) p216-30, ISSN 0042-6822 Journal Code: 0110674

Contract/Grant No.: R01-AI40382; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Membrane-associated *respiratory* *syncytial* *virus* *F* *protein* expressed from a human rhinovirus type 14 *vector* is immunogenic.

Human rhinovirus (HRV) replicons have the potential to serve as respiratory *vaccine* *vectors* for mucosal immunization in humans. However, since many *vaccine* immunogens of interest are glycosylated, an important concern is whether HRV replicons are capable of expressing glycosylated proteins. The human *respiratory* *syncytial* *virus* (RSV) fusion (*F*) *protein* was chosen as a model glycoprotein and the HRV replicon DeltaP1FVP3 was generated by inserting the *F* *protein*-coding sequence in frame and in lieu of the 5' proximal 1489 nucleotides of the capsid-coding segment in the HRV-14 genome. When transfected into H1-HeLa cells, DeltaP1FVP3 replicated and led to the expression of the *F* *protein*. Inhibition with guanidine demonstrated that *F*-*protein* expression was dependent on DeltaP1FVP3 replication and did not result from translation of input RNA. Although most of the *F* *protein* remained as an immature, glycosylated precursor (F0), a readily detectable fraction of the protein was processed into the mature glycosylated subunit F1, an event known...

... capsid proteins using the vaccinia virus/T7 RNA polymerase hybrid system. Packaged replicon RNAs were capable of infecting fresh cells, leading to accumulation of the *F* *protein* as in RNA-transfected cells. Mice immunized with HeLa cell lysates containing *F* *protein* expressed from DeltaP1FVP3 produced neutralizing antibodies against RSV. These results indicate that an HRV-14 replicon can express a foreign glycosylated protein, providing further support for the potential of HRV replicons as a *vaccine* delivery system. Copyright 2001 Academic Press.

; Antibodies, Viral--analysis--AN; Genetic *Vectors*; Hela Cells; Mice; Mice, Inbred BALB C; Replicon; *Respiratory* *Syncytial* *Virus* Infections --prevention and control--PC; *Respiratory* *Syncytial* *Virus* *Vaccines* --administration and dosage--AD; *Respiratory* *Syncytial* *Virus* *Vaccines*--immunology--IM; Respiratory Syncytial Viruses--immunology--IM; Transfection; *Vaccines*, DNA--administration and dosage--AD; *Vaccines*, DNA--immunology--IM; Viral Fusion Proteins--administration and dosage--AD; Viral Fusion Proteins--immunology--IM; Viral Proteins--administration and dosage--AD; Viral Proteins--immunology--IM

Chemical Name: Antibodies, Viral; Genetic *Vectors*; *Respiratory* *Syncytial* *Virus* *Vaccines*; *Vaccines*, DNA; Viral Fusion Proteins;

Viral Proteins; *respira[redacted]y* *syncytial* *virus* protein[redacted]

11/3,K/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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10724791 20281683 PMID: 10823273
CD40 ligand (CD154) enhances the Th1 and antibody responses to *respiratory* *syncytial* *virus* in the BALB/c mouse.
Tripp R A; Jones L; Anderson L J; Brown M P
Division of Viral and Rickettsial Diseases, National Center of Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333, USA. rgt3@cdc.gov
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jun 1 2000, 164 (11) p5913-21, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

CD40 ligand (CD154) enhances the Th1 and antibody responses to *respiratory* *syncytial* *virus* in the BALB/c mouse.
... and T cell-dendritic cell interactions. CD40L expression promotes Th1 cytokine responses to protein Ags and is responsible for Ig isotype switching in B cells. *Respiratory* *syncytial* *virus* (RSV) is an important pathogen of young children and the elderly, which causes bronchiolitis and pneumonia. Studies of mice infected with RSV suggest that a...

... for enhanced pulmonary disease. To investigate the effect CD40L has on RSV immunity, mice were infected simultaneously with RSV and either an empty control adenovirus *vector* or one expressing CD40L or were coimmunized with plasmid DNA *vectors* expressing CD40L and *RSV* *F* and/or G proteins and subsequently challenged with RSV. The kinetics of the intracellular and secreted cytokine responses, the cytotoxic T lymphocyte precursor frequency, NO...

... F and anti-G Ab responses. These data suggest that CD40L may have the adjuvant properties needed to optimize the safety and efficacy of RSV *vaccines*.
...; biosynthesis--BI; Stem Cells--cytology--CY; Stem Cells--immunology --IM; T-Lymphocytes, Cytotoxic--cytology--CY; T-Lymphocytes, Cytotoxic --immunology--IM; Th1 Cells--metabolism--ME; Viral *Vaccines* --administration and dosage--AD; Viral *Vaccines*--immunology--IM
Chemical Name: Adjuvants, Immunologic; Antibodies, Viral; Antigens, CD40; Cytokines; Epitopes, T-Lymphocyte; Histocompatibility Antigens Class I; Ligands; Membrane Glycoproteins; Viral *Vaccines*; Nitric Oxide; CD40 Ligand

11/3,K/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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10489276 20027234 PMID: 10559323
Priming with a secreted form of the fusion protein of *respiratory* *syncytial* *virus* (RSV) promotes interleukin-4 (IL-4) and IL-5 production but not pulmonary eosinophilia following RSV challenge.
Bembridge G P; Lopez J A; Bustos R; Melero J A; Cook R; Mason H; Taylor G
Institute for Animal Health, Compton, Newbury RG20 7NN, United Kingdom. Gary.Bembridge@bbsrc.ac.uk
Journal of virology (UNITED STATES) Dec 1999, 73 (12) p10086-94, ISSN 0022-538X Journal Code: 0113724
Document type: Journal Article
Languages: ENGLISH

Main Citation Owner: N
Record type: Completed

Priming with a secreted form of the fusion protein of *respiratory* *syncytial* *virus* (RSV) promotes interleukin-4 (IL-4) and IL-5 production but not pulmonary eosinophilia following RSV challenge.

The attachment (G) protein of *respiratory* *syncytial* *virus* (RSV) is synthesized as two mature forms: a membrane-anchored form and a smaller secreted form. BALB/c mice scarified with vaccinia virus (VV) expressing... ... a soluble form of an RSV protein was sufficient to induce eosinophilia following RSV challenge, a cDNA that encoded a secreted form of the fusion (*F*) *protein* of RSV was constructed and expressed in VV (VV-Ftm(-)). Splenocytes and lung lymphocytes from mice primed with VV-Ftm(-) produced significantly more of the Th2 cytokines interleukin-4 (IL-4) and IL-5 than did mice vaccinated with VV expressing either the native (membrane-anchored) form of the *F* *protein* or the G protein. Although mice scarified with VV-Ftm(-) developed a slight increase in the number of pulmonary eosinophils following RSV infection, the increase...

...strains expressing soluble forms of RSV proteins induce immune responses that are more Th2-like. However, this change alone does not appear sufficient to induce *vaccine* -augmented disease in the face of active CD8(+) CTL populations.

Descriptors: Antigens, Viral--immunology--IM; *Interleukin-4 --biosynthesis--BI; *Interleukin-5--biosynthesis--BI; *Pulmonary Eosinophil ia--immunology--IM; **Respiratory* *Syncytial* *Virus*, Human--immunology --IM; *Viral Envelope Proteins--immunology--IM; *Viral Fusion Proteins --immunology--IM; *Viral Proteins--immunology--IM; Antibodies, Viral --biosynthesis--BI; Antibodies, Viral--immunology--IM; Antigens, Viral --genetics--GE; Antigens, Viral--isolation and purification--IP; Cytokines --biosynthesis--BI; Genetic *Vectors*--genetics--GE; Genetic *Vectors* --immunology--IM; Injections, Intraperitoneal; Kinetics; Lung--immunology --IM; Lung--pathology--PA; Mice; Mice, Inbred BALB C; Recombinant Fusion Proteins--genetics--GE; Recombinant Fusion Proteins--immunology--IM; Recombinant Fusion Proteins--isolation and purification--IP; *Respiratory* *Syncytial* *Virus*, Human--genetics--GE; T-Lymphocytes, Cytotoxic --immunology--IM; Tumor Cells, Cultured; Vaccination; Vaccinia virus --genetics--GE; Vaccinia virus--immunology--IM; Viral Envelope Proteins --genetics--GE...

Chemical Name: Antibodies, Viral; Antigens, Viral; Cytokines; Genetic *Vectors*; Interleukin-5; Recombinant Fusion Proteins; Viral Envelope Proteins; Viral Fusion Proteins; Viral Proteins; attachment protein G; *respiratory* *syncytial* *virus* proteins; Interleukin-4; beta-Galactosidase

11/3,K/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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10140824 99128401 PMID: 9927576

Recombinant vesicular stomatitis virus expressing *respiratory* *syncytial* *virus* (RSV) glycoproteins: RSV fusion protein can mediate infection and cell fusion.

Kahn J S; Schnell M J; Buonocore L; Rose J K

Division of Infectious Diseases, Yale University School of Medicine, New Haven, Connecticut, 06510, USA.

Virology (UNITED STATES) Feb 1 1999, 254 (1) p81-91, ISSN 0042-6822 Journal Code: 0110674

Contract/Grant No.: AI-01469; AI; NIAID; AI-24345; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Recombinant vesicular stomatitis virus expressing *respiratory*

***syncytial* *virus* (RSV) glycoproteins: RSV fusion protein can mediate infection and cell fusion.**

The genes encoding the *respiratory* *syncytial* *virus* (RSV) attachment (G) and fusion (F) envelope glycoproteins were expressed separately as additional genes in recombinant vesicular stomatitis viruses (VSV). Cells infected with the VSV-*RSV* *F* recombinant formed large syncytia illustrating the fusion activity of F in absence of other RSV proteins. Both F and G glycoproteins were expressed at the...

... did not require cytoplasmic tail sequences of VSV G. Using a compound, ammonium chloride, that raises the endosomal pH, we showed that presence of the *RSV* *F* glycoprotein in the envelope of recombinant VSV allowed for infectivity through a low-pH-independent pathway. Recombinant VSV expressing RSV glycoproteins could be useful as an RSV *vaccine*. Copyright 1999 Academic Press.

Descriptors: Genetic *Vectors*; *Glycoproteins--metabolism--ME; **Respiratory* *Syncytial* *Virus*, Human--metabolism--ME; *Vesicular stomatitis-Indiana virus; *Viral Envelope Proteins--metabolism--ME; *Viral Fusion Proteins--metabolism--ME; *Viral Proteins--metabolism--ME...; Line; Cytoplasm--metabolism--ME; Gene Expression; Glycoproteins--genetics--GE; Hamsters; Membrane Fusion; Molecular Sequence Data; Recombinant Fusion Proteins--genetics--GE; Recombinant Fusion Proteins--metabolism--ME; *Respiratory* *Syncytial* *Virus*, Human--genetics--GE; Tumor Cells, Cultured; Viral Envelope Proteins--genetics--GE; Viral Fusion Proteins --genetics--GE; Viral Proteins--genetics--GE; Virion--metabolism--ME

Chemical Name: Genetic *Vectors*; Glycoproteins; Recombinant Fusion Proteins; Viral Envelope Proteins; Viral Fusion Proteins; Viral Proteins; attachment protein G; *respiratory* *syncytial* *virus* proteins

11/3,K/8 (Item 8 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

09956425 98372759 PMID: 9705950

Protection against *respiratory* *syncytial* *virus* infection by DNA immunization.

Li X; Sambhara S; Li C X; Ewasyshyn M; Parrington M; Caterini J; James O; Cates G; Du R P; Klein M

Research Centre, Pasteur Merieux Connaught Canada, North York, Ontario, Canada M2R 3T4. xli@ca.pmc-vacc.com

Journal of experimental medicine (UNITED STATES) Aug 17 1998, 188 (4) p681-8, ISSN 0022-1007 Journal Code: 2985109R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Protection against *respiratory* *syncytial* *virus* infection by DNA immunization.

Respiratory *syncytial* *virus* (RSV) remains a major cause of morbidity and mortality in infants and the elderly and is a continuing challenge for *vaccine* development. A murine T helper cell (Th) type 2 response associates with enhanced lung pathology, which has been observed in past infant trials using formalin-inactivated RSV *vaccine*. In this study, we have engineered an optimized plasmid DNA *vector* expressing the RSV fusion (*F*) *protein* (DNA-F). DNA-F was as effective as live RSV in mice at inducing neutralizing antibody and cytotoxic T lymphocyte responses, protection against infection, and...

... anti-RSV Th2 response towards a Th1 response. Critical elements for the optimization of the plasmid constructs included expression of a secretory form of the *F* *protein* and the presence of the rabbit beta-globin intron II sequence upstream of the F-encoding sequence. In addition, anti-F systemic immune response profile...

Descriptors: *Respiratory* *Syncytial* *Virus* Infections--prevention and

control--PC; **Respirat[redacted]* *Syncytial* *Virus*, Human--[redacted]munology--IM; * *Vaccines*, DNA--immunology--IM; *Viral Fusion Proteins--immunology--IM; *Viral Proteins--immunology--IM; *Viral *Vaccines*--immunology--IM; Antibodies, Viral--immunology--IM; Antigens, Viral--genetics--GE; Antigens, Viral--immunology--IM; Cells, Cultured; Disease Models, Animal; Drug Administration Routes; Genetic *Vectors*; Interferon Type II --immunology--IM; Interleukin-4--immunology--IM; Interleukin-5--immunology --IM; Lung--immunology--IM; Mice; Mice, Inbred BALB C; Plasmids; Rabbits; *Respiratory* *Syncytial* *Virus* Infections--immunology--IM; *Respiratory* *Syncytial* *Virus*, Human--genetics--GE; Th1 Cells--immunology--IM; Th2 Cells--immunology--IM; Vaccination; *Vaccines*, DNA--genetics--GE; Viral Fusion Proteins--genetics--GE; Viral Proteins--genetics--GE; Viral *Vaccines*--genetics--GE

Chemical Name: Antibodies, Viral; Antigens, Viral; Genetic *Vectors*; Interleukin-5; Plasmids; *Vaccines*, DNA; Viral Fusion Proteins; Viral Proteins; Viral *Vaccines*; attachment protein G; *respiratory* *syncytial* *virus* proteins; Interleukin-4; Interferon Type II

11/3,K/9 (Item 9 from file: 155)

09906813 98333666 PMID: 9665976

***Respiratory* *syncytial* *virus* *vaccines*.**

Dudas R A; Karron R A

Department of International Health, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland 21205, USA.

Clinical microbiology reviews (UNITED STATES) Jul 1998, 11 (3) p430-9, ISSN 0893-8512 Journal Code: 8807282

Document type: Journal Article; Review; Review, Academic

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

***Respiratory* *syncytial* *virus* *vaccines*.**

Respiratory *syncytial* *virus* (RSV) is the most important cause of viral lower respiratory tract illness (LRI) in infants and children worldwide and causes significant LRI in the elderly...

...in immunocompromised patients. The goal of RSV vaccination is to prevent serious RSV-associated LRI. There are several obstacles to the development of successful RSV *vaccines* , including the need to immunize very young infants, who may respond inadequately to vaccination; the existence of two antigenically distinct RSV groups, A and B; and the history of disease enhancement following administration of a formalin-inactivated *vaccine*. It is likely that more than one type of *vaccine* will be needed to prevent RSV LRI in the various populations at risk. Although *vector* delivery systems, synthetic peptide, and immune-stimulating complex *vaccines* have been evaluated in animal models, only the purified *F* *protein* (PFP) subunit *vaccines* and live attenuated *vaccines* have been evaluated in recent clinical trials. PFP-2 appears to be a promising *vaccine* for the elderly and for RSV-seropositive children with underlying pulmonary disease, whereas live cold-passaged (cp), temperature-sensitive (ts) RSV *vaccines* (denoted cpts *vaccines*) would most probably be useful in young infants. The availability of cDNA technology should allow further refinement of existing live attenuated cpts candidate *vaccines* to produce engineered *vaccines* that are satisfactorily attenuated, immunogenic, and phenotypically stable.

Descriptors: *Respiratory* *Syncytial* *Virus* Infections--prevention and control--PC; *Respiratory Syncytial Viruses; *Viral *Vaccines*--therapeutic use--TU; Adult; Child; *Vaccines*, DNA--therapeutic use--TU; *Vaccines*, Inactivated--therapeutic use--TU

Chemical Name: *Vaccines*, DNA; *Vaccines*, Inactivated; Viral *Vaccines*

11/3,K/10 (Item 10 [redacted]m file: 155)
DIALOG(R)File 155:MEDLINE(R)
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09779093 98201946 PMID: 9542947

Baculovirus expression of the fusion protein gene of bovine *respiratory* *syncytial* *virus* and utility of the recombinant protein in a diagnostic enzyme immunoassay.

Bastey M K; Samal S K

Virginia-Maryland Regional College of Veterinary Medicine, University of Maryland, College Park 20742, USA.

Journal of clinical microbiology (UNITED STATES) Apr 1998, 36 (4) p1113-9, ISSN 0095-1137 Journal Code: 7505564

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Baculovirus expression of the fusion protein gene of bovine *respiratory* *syncytial* *virus* and utility of the recombinant protein in a diagnostic enzyme immunoassay.

The fusion (*F*) *protein* of bovine *respiratory* *syncytial* *virus* (BRSV) was expressed by using a baculovirus *vector*. Antigenicity was tested by immunofluorescence analysis with F-specific monoclonal and polyclonal antibodies. Antibodies to recombinant *F* *protein* raised in a rabbit neutralized BRSV and human *respiratory* *syncytial* *virus* infectivity when tested in a plaque reduction assay. The recombinant *F* *protein* was evaluated as a source of antigen in an enzyme-linked immunosorbent assay (ELISA), and this ELISA was compared with the virus neutralization (VN) test for detecting BRSV antibodies in 10 consecutive serum samples from four calves vaccinated with a live modified BRSV *vaccine* and from two nonvaccinated control calves. The ELISA with the baculovirus-expressed *F* *protein* as an antigen compared favorably with the VN test and is a rapid, sensitive, and specific method for detecting serum antibodies to BRSV.

Descriptors: Antibodies, Viral--blood--BL; *Baculoviridae--genetics--GE; **Respiratory* *Syncytial* *Virus* Infections--diagnosis--DI; *Respiratory* *Syncytial* *Virus*, Bovine--immunology--IM; *Viral Fusion Proteins--immunology--IM; Cattle; Enzyme-Linked Immunosorbent Assay; Immune Sera--immunology--IM; Rabbits; Recombinant Proteins--immunology--IM; *Respiratory* *Syncytial* *Virus*, Bovine--genetics--GE; Vaccination; Viral Fusion Proteins--genetics--GE

11/3,K/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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08278612 95037721 PMID: 7950387

Purification of a recombinant human *respiratory* *syncytial* *virus* chimeric glycoprotein using reversed-phase chromatography and protein refolding in guanidine hydrochloride.

Wells P A; Garlick R L; Lyle S B; Tuls J L; Poorman R A; Brideau R J; Wathen M W

Upjohn Company, Kalamazoo, Michigan 49001.

Protein expression and purification (UNITED STATES) Aug 1994, 5 (4) p391-401, ISSN 1046-5928 Journal Code: 9101496

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Purification of a recombinant human *respiratory* *syncytial* *virus* chimeric glycoprotein using reversed-phase chromatography and protein refolding in guanidine hydrochloride.

FG glycoprotein is a recombinant chimeric protein consisting of the

extracellular portions of human *respiratory* *syncytial* *virus* (*RSV*) *F* and G glycoproteins. In theory, highly purified FG glycoprotein may be effective as a RSV *vaccine*. Recombinant FG glycoprotein was expressed using the baculovirus/insect cell system. FG glycoprotein was isolated from cell culture supernatants using S Sepharose ion-exchange chromatography...

... and protein refolding in Tween 80 detergent. The purified FG glycoprotein was concentrated on a S Sepharose column and exchanged into an appropriate buffer for *vaccine* formulation. Five batches of FG glycoprotein with protein purity of 92-99% were produced using this purification process. FG glycoprotein produced using reversed-phase chromatography and protein refolding was compared with nondenatured FG glycoprotein using a panel of 14 monoclonal antibodies directed against conformational and linear epitopes on *RSV* *F* and G glycoproteins. The results of these studies indicated that refolded FG glycoprotein has the same three-dimensional structure as nondenatured FG glycoprotein.

Descriptors: *Respiratory* *Syncytial* *Virus* Infections--prevention and control--PC; **Respiratory* *Syncytial* *Virus*, Human; **Vaccines*, Synthetic--isolation and purification--IP; *Viral Proteins--isolation and purification--IP; *Viral *Vaccines*--isolation and purification--IP; Amino Acid Sequence; Baculoviridae--genetics--GE; Cells, Cultured; Chimeric Proteins--isolation and purification--IP; Chromatography; Genetic *Vectors*; Guanidine; Guanidines; Mice; Molecular Sequence Data; Protein Conformation; Protein Folding; *Respiratory* *Syncytial* *Virus* Infections--immunology--IM; Spodoptera--cytology--CY; *Vaccines*, Synthetic--genetics--GE; Viral Proteins--genetics--GE; Viral *Vaccines*--genetics--GE

Chemical Name: Chimeric Proteins; Genetic *Vectors*; Guanidines; *Vaccines*, Synthetic; Viral Proteins; Viral *Vaccines*; attachment protein G; *respiratory* *syncytial* *virus* proteins; Guanidine

11/3,K/12 (Item 12 from file: 155)

07856940 93389460 PMID: 8397289

Development of a novel subunit *vaccine* that protects cotton rats against both human *respiratory* *syncytial* *virus* and human parainfluenza virus type 3.

Homa F L; Brideau R J; Lehman D J; Thomsen D R; Olmsted R A; Wathen M W
Upjohn Company, Kalamazoo, Michigan 49001.

Journal of general virology (ENGLAND) Sep 1993, 74 (Pt 9) p1995-9,
ISSN 0022-1317 Journal Code: 0077340
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Development of a novel subunit *vaccine* that protects cotton rats against both human *respiratory* *syncytial* *virus* and human parainfluenza virus type 3.

A cotton rat model of experimental human *respiratory* *syncytial* *virus* (RSV) and human parainfluenza virus type 3 (PIV-3) infection was used to examine the efficacy of FRHNP, a novel chimeric glycoprotein which contains the extracellular regions of the fusion glycoprotein of RSV and the attachment glycoprotein of PIV-3, as a single subunit *vaccine* against these two viruses. This work was prompted by previous cotton rat studies that demonstrated that the major protective antigens of the two viruses were...

... from either RSV or PIV-3 challenge. These results demonstrate that in the cotton rat animal model a single chimeric glycoprotein can be an effective *vaccine* against both RSV and PIV-3.

Descriptors: Parainfluenza Virus 3, Human; *Paramyxoviridae Infections--immunology--IM; *Respiratory Syncytial Viruses; *Respirovirus Infections--immunology--IM; **Vaccines*, Synthetic; *Viral Fusion Proteins

--immunology--IM; *Viral [redacted]oteins--immunology--IM; *Viral [redacted]accines*; Amino Acid Sequence; Antibodies, Viral--blood--BL; Baculoviridae--genetics--GE; Base Sequence; Chimeric Proteins--immunology--IM; Genes, Viral; Genetic *Vectors*; Hesperomyinae; Immunoglobulin G--blood--BL; Lung--microbiology --MI; Macromolecular Systems; Molecular Sequence Data; Neutralization Tests ; Parainfluenza Virus 3, Human--immunology--IM; Paramyxoviridae Infections --prevention and...

Chemical Name: Antibodies, Viral; Chimeric Proteins; Genetic *Vectors*; Immunoglobulin G; Macromolecular Systems; *Vaccines*, Synthetic; Viral Fusion Proteins; Viral Proteins; Viral *Vaccines*; attachment protein G; *respiratory* *syncytial* *virus* proteins; *F* *protein*, parainfluenza virus 3

11/3,K/13 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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14037975 BIOSIS NO.: 200300032004
Alphavirus *vectors* for paramyxovirus *vaccines*.
AUTHOR: Parrington Mark(a); Li Xiaomao; Klein Michel H
AUTHOR ADDRESS: (a)Bradford, Canada**Canada
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1264 (1):pNo Pagination Nov. 5 2002 2002
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

Alphavirus *vectors* for paramyxovirus *vaccines*.

ABSTRACT: A DNA *vector* comprises a first DNA sequence which is complementary to at least part of an alphavirus RNA genome and having the complement of complete alphavirus DNA genome replication regions, and a second DNA sequence encoding a paramyxovirus protein, particularly a *respiratory* *syncytial* *virus* fusion (*RSV* *F*) *protein* or a *RSV* *F* *protein* fragment that generates antibodies that specifically react with *RSV* *F* *protein*, the first and second DNA sequences being under the transcriptional control of a promoter, preferably a cytomegalovirus promoter, which may include Intron A. Such *vectors* also contain a further nucleotide sequence located between the promoter sequence and the alphavirus sequence to enhance the immunoprotective ability of the *RSV* *F* *protein* when expressed in vivo. Such DNA *vectors* may be used to immunize a host against disease caused by infection with RSV or other paramyxovirus, including a human host, by administration thereto, and may be formulated as immunogenic compositions with pharmaceutically-acceptable carriers for such purposes. Such *vectors* also may be used to produce antibodies for detection of RSV or other paramyxovirus infection in a sample.
DESCRIPTORS:
CHEMICALS & BIOCHEMICALS: paramyxovirus *vaccine* alphavirus *vector*

11/3,K/14 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

13956674 BIOSIS NO.: 200200085495
Design of a recombinant cholera toxin based mucosal immunogen against RSV.
AUTHOR: Singh S R(a); Roberts S R
AUTHOR ADDRESS: (a)Alabama State University, Montgomery, AL**USA
JOURNAL: Abstracts of the General Meeting of the American Society for Microbiology 102p185 2002
MEDIUM: print
CONFERENCE/MEETING: 102nd General Meeting of the American Society for

Microbiology Salt Lake City, UT, USA May 19-23, 2002
SPONSOR: American Society for Microbiology
ISSN: 1060-2011
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The antigenic regions corresponding to residues 412-524 of *respiratory* *syncytial* *virus* (*RSV*) *F* *protein* was amplified by PCR using a plasmid containing the full length *RSV* *F* gene. The amplified gene was cloned into a *vector* containing the ctxA2B gene of the cholera toxin and the recombinant DNA was established in E. coli Novablue. The clones with the correct insert and...
...on an HPLC size exclusion column. The proper folding and reassociation of FA2-CTB chimeric protein was confirmed by GM1-ELISA. The presence of the *RSV* *F* *protein* and CTB in the chimera was also confirmed by western immunoblotting using anti-RSV and anti-CT polyclonal antibodies, respectively. The purified FA2-CTB protein...
DESCRIPTORS:
...ORGANISMS: RSV (*respiratory* *syncytial* *virus*) (Paramyxoviridae...
MISCELLANEOUS TERMS: ...*vaccine* design...

...*vaccine* development

11/3,K/15 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

12991619 BIOSIS NO.: 200100188768
Nucleic acid *respiratory* *syncytial* *virus* *vaccines*.
AUTHOR: Li Xiaomao(a); Ewasyshyn Mary E; Sambhara Suryaprakash; Klein Michel H
AUTHOR ADDRESS: (a)Toronto**Canada
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1236 (1):pNo Pagination July 4, 2000
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

Nucleic acid *respiratory* *syncytial* *virus* *vaccines*.

ABSTRACT: Non-replicating *vectors* containing a nucleotide sequence coding for an *F* *protein* of *respiratory* *syncytial* *virus* (RSV) and a promoter for such sequence, preferably a cytomegalovirus promoter, are described for in vivo immunization. The nucleotide sequence encoding the *RSV* *F* *protein* may lack a sequence encoding the homologous signal peptide but possessing a heterologous signal peptide enhancing *RSV* *F* *protein* expression. Such non-replicating *vectors*, including plasmids, also may contain a further nucleotide sequence located adjacent to the *RSV* *F* *protein* encoding sequence to enhance the immunoprotective ability of the *RSV* *F* *protein* when expressed in vivo. Such non-replicating *vectors* may be used to immunize a host against disease caused by infection with RSV, including a human host, by administration thereto, and may be formulated as immunogenic compositions with pharmaceutically-acceptable carriers for such purpose. Such *vectors* also may be used to produce antibodies for detection of RSV infection in a sample.
DESCRIPTORS:
ORGANISMS: *respiratory* *syncytial* *virus* (RSV) (Paramyxoviridae...
CHEMICALS & BIOCHEMICALS: *RSV* *F* *protein*--...

...RSV *vaccine*--*vaccine*;

11/3,K/16 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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12767123 BIOSIS NO.: 200000520746
RNA *respiratory* *syncytial* *virus* *vaccines*.
AUTHOR: Parrington Mark(a)
AUTHOR ADDRESS: (a)Bradford**Canada
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1234 (2):pNo pagination May 9, 2000
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

RNA *respiratory* *syncytial* *virus* *vaccines*.

ABSTRACT: A *vector* comprising a first DNA sequence which is complementary to at least part of an alphavirus RNA genome and having the complement of complete alphavirus DNA genome replication regions, a second DNA sequence encoding a paramyxovirus protein, particularly a *respiratory* *syncytial* *virus* fusion (*RSV* *F*) *protein* or a *RSV* *F* *protein* fragment that generates antibodies that specifically react with *RSV* *F* *protein*, the first and second DNA sequences being under the transcriptional control of a promoter is described. Such *vector* may be used to produce an RNA transcript which may be used to immunize a host, including a human host, to protect the host against disease caused by paramyxovirus, particularly *respiratory* *syncytial* *virus*, by administration to the host.
DESCRIPTORS:
...ORGANISMS: *respiratory* *syncytial* *virus* (Paramyxoviridae)
CHEMICALS & BIOCHEMICALS: ...RNA *respiratory* *syncytial* *virus* *vaccine*--*vaccine*; *RSV* *F* *protein*

11/3,K/17 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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12760199 BIOSIS NO.: 200000513822
Nucleotide sequences encoding bovine *respiratory* *syncytial* *virus* immunogenic proteins.
AUTHOR: Wertz Gail W(a); Lerch Robert
AUTHOR ADDRESS: (a)Birmingham, AL**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1234 (2):pNo pagination May 9, 2000
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

Nucleotide sequences encoding bovine *respiratory* *syncytial* *virus* immunogenic proteins.

...ABSTRACT: invention relates to recombinant DNA molecules which encode bovine respiratory syncytial (BRS) virus proteins, to BRS virus proteins, and peptides and to recombinant BRS virus *vaccines* produced therefrom. It is based, in part, on the cloning of substantially full length cDNAs which encode the entire BRS virus G, F, and N...
...invention, DNA encoding a BRS virus protein or peptide may be used to diagnose BRS virus infection, or, alternatively, may be inserted into an expression *vector*, including, but not limited to, vaccinia virus as well as bacterial, yeast, insect, or other vertebrate *vectors*. These expression *vectors* may be utilized to produce the BRS virus protein or

peptide in quantity; the resulting substantially pure viral peptide or protein may be incorporated into subunit *vaccine* formulations or may be used to generate monoclonal or polyclonal antibodies which may be utilized in diagnosis of BRS virus infection or passive immunization. In additional embodiments, BRS virus protein sequence provided by the invention may be used to produce synthetic peptides or proteins which may be utilized in subunit *vaccines*,or polyclonal or monoclonal antibody production. Alternatively, a nonpathogenic expression *vector* containing the genes, parts of the genes, any combination of the genes, or parts thereof may itself be utilized as a recombinant virus *vaccine*.
DESCRIPTORS:
ORGANISMS: bovine *respiratory* *syncytial* *virus* (Paramyxoviridae)
CHEMICALS & BIOCHEMICALS: ...bovine respiratory syncytial viral *F* *protein*;

11/3,K/18 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

12105357 BIOSIS NO.: 199900400206
***Respiratory* *syncytial* *virus* G and/or SH protein alters Th1 cytokines, natural killer cells, and neutrophils responding to pulmonary infection in BALB/c mice.**
AUTHOR: Tripp Ralph A(a); Moore Deborah; Jones Les; Sullender Wayne; Winter Jorn; Anderson Larry J
AUTHOR ADDRESS: (a)Centers for Disease Control and Prevention, 1600 Clifton Rd., Atlanta, GA, 30333**USA
JOURNAL: Journal of Virology 73 (9):p7099-7107 Sept., 1999
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

***Respiratory* *syncytial* *virus* G and/or SH protein alters Th1 cytokines, natural killer cells, and neutrophils responding to pulmonary infection in BALB/c mice.**

ABSTRACT: BALB/c mice sensitized to vaccinia virus expressed G protein of *respiratory* *syncytial* *virus* (RSV) develop a Th2-type cytokine response and pulmonary eosinophilia when challenged with live RSV. In this study, BALB/c mice were immunized or challenged with an RSV mutant lacking the G and SH proteins or with DNA *vaccines* coding for RSV G or *F* *protein*. F or G protein DNA *vaccines* were capable of sensitizing for pulmonary eosinophilia. The absence of the G and/or SH protein in the infecting virus resulted in a consistent increase...
DESCRIPTORS:
...ORGANISMS: *respiratory* *syncytial* *virus* (Paramyxoviridae...

...gene *vector*;
CHEMICALS & BIOCHEMICALS: ...*F* *protein* DNA *vaccine*; ...

...G protein DNA *vaccine*;

11/3,K/19 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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11027814 BIOSIS NO.: 199799648959
Baculovirus expression of the *respiratory* *syncytial* *virus* fusion protein using Trichoplusia ni insect cells.
AUTHOR: Barrington Mark(a); Cockle Stephen(a); Wyde Philip; Du Run-Pan(a); Snell Ellen(a); Yan Wei-Yao(a); Wang Qijun(a); Gisonni Lucy(a); Sanhueza Sonia(a); Ewasyshyn Mary(a); Klein Michel(a)

AUTHOR ADDRESS: (a)Connaught Cent. Biotechnol. Res., Connaught Lab. Ltd., 1755 Steeles Ave. W., North York, ON M2R **Canada
JOURNAL: Virus Genes 14 (1):p63-72 1997
ISSN: 0920-8569
RECORD TYPE: Abstract
LANGUAGE: English

Baculovirus expression of the *respiratory* *syncytial* *virus* fusion protein using Trichoplusia ni insect cells.

ABSTRACT: *Respiratory* *syncytial* *virus* (RSV) is a major viral pathogen responsible for severe respiratory tract infections in infants, young children, and the elderly. The RSV fusion (*F*) *protein* is highly conserved among RSV subgroups A and B and is the major protective immunogen. A genetically-engineered version of the *RSV* *F* *protein* was produced in insect cells using the baculovirus expression system. To express a secreted form of this protein, the transmembrane domain was eliminated by removing the region of the gene encoding 48 amino acids at the C-terminus. Production of the truncated *RSV* *F* *protein* (RSV-Fs) was compared in two different insect cell lines, Spodoptera frugiperda (Sf9) and Trichoplusia ni (High Five). The yield of RSV-Fs secreted from ...

...2-F-1 proteolytic cleavage site, most of the RSV-Fs protein secreted by Sf9 cells was unprocessed or incorrectly processed. Antigenicity of the major *RSV* *F* neutralization epitopes was maintained in the RSV-Fs protein secreted from High Five cells. The RSV-specific neutralizing antibody titres in the sera of cotton...
DESCRIPTORS:
...ORGANISMS: *respiratory* *syncytial* *virus* (Paramyxoviridae
MISCELLANEOUS TERMS: ...GENE *VECTOR*; ...

...*RESPIRATORY* *SYNCYTIAL* *VIRUS* FUSION PROTEIN...

...*VACCINE*;

11/3,K/20 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10793327 BIOSIS NO.: 199799414472
Immunological response of mice to the bovine *respiratory* *syncytial* *virus* fusion glycoprotein expressed in recombinant baculovirus infected insect cells.
AUTHOR: Walravens K(a); Matheise J P; Knott I; Coppe P; Collard A; Didembourg C; Dessy F; Kettmann R; Letesson J-J(a)
AUTHOR ADDRESS: (a)Lab. Microbiol. d'Immunol., Fac. Univ. Notre-Dame de la Paix, rue de Bruxelles 61, B-500 Namur**Belgium
JOURNAL: Archives of Virology 141 (12):p2313-2326 1996
ISSN: 0304-8608
RECORD TYPE: Abstract
LANGUAGE: English

Immunological response of mice to the bovine *respiratory* *syncytial* *virus* fusion glycoprotein expressed in recombinant baculovirus infected insect cells.

ABSTRACT: Bovine *respiratory* *syncytial* *virus* (BRSV) is a major cause of respiratory disease in calves. The BRSV genome encodes two major glycoproteins, G and F, which are the major targets for the host antibody response. We have expressed the F glycoprotein in insect cells (Sf9) using a recombinant baculovirus *vector*. A comparison of the *F* *protein* expressed in mammalian and insect cells by SDS-PAGE showed that only part of the baculovirus-produced protein was soluble and processed like the native protein. The antigenicity of the soluble form of the *F*

protein expressed in [redacted]sect cells was identical to th[redacted]of the *F* *protein* expressed in mammalian cells. Immunization with the *F* *protein* expressed in insect cells induced neutralizing antibodies in mice. This antigenic preparation adjuvanted with Quil-A produced an increased neutralizing antibody titer and induced protection.
MISCELLANEOUS TERMS: ...BOVINE *RESPIRATORY* *SYNCYTIAL* *VIRUS* FUSION GLYCOPROTEIN...

...*VACCINE*

11/3,K/21 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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09114762 BIOSIS NO.: 199497123152
Binding of neutralizing monoclonal antibodies to regions of the fusion protein of *respiratory* *syncytial* *virus* expressed in Escherichia coli.
AUTHOR: Lounsbah G R; Bourgeois C; West W H L; Robinson J W; Carter M J; Toms G L(a)
AUTHOR ADDRESS: (a)Div. Virol., Sch. Pathological Sci., Med. Sch., Univ. Newcastle upon Tyne, Framlington Place, Ne**UK
JOURNAL: Journal of General Virology 74 (12):p2559-2565 1993
ISSN: 0022-1317
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Binding of neutralizing monoclonal antibodies to regions of the fusion protein of *respiratory* *syncytial* *virus* expressed in Escherichia coli.

ABSTRACT: cDNA containing the entire coding sequence of the respiratory syncytial (RS) virus fusion (*F*) *protein* gene (574 amino acids) and two large PstI restriction fragments, encoding amino acids 18 to 212 and 214 to 574, were expressed in Escherichia coli as C-terminal chimeras with beta-galactosidase (beta-gal) in the pEX expression *vector* system. A further cDNA fragment, overlapping the PstI restriction site and encoding amino acids 190 to 239, was derived by PCR and expressed in a...

...mer overlapping synthetic peptides containing the sequence 265 to 272 (PITNDQKK) but MAb 1E3 failed to bind to any 12-mer peptide derived from the *F* *protein* sequence. Immunization of mice with chimeric proteins containing the whole *F* *protein* coding sequence or amino acids 253 to 384, which includes the binding site of the two MAbs identified here, failed to induce antibodies that recognized the native RS virus *F* *protein* or could neutralize the virus. This suggests that either the beta-gal partner inhibits the immune response to the protein or that elements missing from...
MISCELLANEOUS TERMS: ...*VACCINE* RELEVANCE

11/3,K/22 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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09269921 BIOSIS NO.: 000094051094
BOVINE *RESPIRATORY* *SYNCYTIAL* *VIRUS* FUSION PROTEIN GENE SEQUENCE ANALYSIS OF CDNA AND EXPRESSION USING A BACULOVIRUS *VECTOR*
AUTHOR: HIMES S R; GERSHWIN L J
AUTHOR ADDRESS: UNIV. CALIF., AGRIC. EXP. STN., SCH. VET. MED., DEP. VET. MICROBIOL. IMMUNOL., DAVIS, CALIF. 95616-8738.
JOURNAL: J GEN VIROL 73 (6): 1992. 1563-1567. 1992
FULL JOURNAL NAME: Journal of General Virology
CODEN: JGVIA

RECORD TYPE: Abstract
LANGUAGE: ENGLISH

BOVINE *RESPIRATORY* *SYNCYTIAL* *VIRUS* FUSION PROTEIN GENE SEQUENCE ANALYSIS OF CDNA AND EXPRESSION USING A BACULOVIRUS *VECTOR*

ABSTRACT: The nucleotide sequence of bovine *respiratory* *syncytial* *virus* (RSV), ATCC strain A51908 fusion (F) glycoprotein gene cDNA was determined. The amino acid sequence deduced was then compared to those of two different isolates of bovine RSV, strains RB 94 and 391-2, and the A and B subtypes of human RSV, strains 18537 and A2. The bovine *RSV* *F* *protein* is highly conserved between the three isolates, A51908 has 97% amino acid identity to RB 94, and 99% identity to 391-2. The F proteins of both the A and B types of human RSV are 81% identical to that of A51908. The cDNA clone was expressed using a baculovirus *vector* and the expressed recombinant *F* *protein* produced in SF9 cells was characterized by Western blot analysis. The recombinant *F* *protein* was post-translationally cleaved into the active form and reacted with serum from bovine RSV-infected calves.
DESCRIPTORS: HUMAN *RESPIRATORY* *SYNCYTIAL* *VIRUS* STRAIN COMPARISON SF9 CELLS POST-TRANSLATIONAL CLEAVAGE ANTISERUM REACTIVITY COMPLEMENTARY DNA NUCLEOTIDE SEQUENCE AMINO ACID SEQUENCE MOLECULAR SEQUENCE DATA *VACCINE* RELEVANCE GENETICALLY ENGINEERED ORGANISM GENETICALLY ENGINEERED PRODUCT BIOTECHNOLOGY SYNTHETIC METHOD

11/3,K/23 (Item 11 from file: 5)

07682264 BIOSIS NO.: 000092029185
CYTOTOXIC T CELL ACTIVITY AGAINST THE 22-KDA PROTEIN OF HUMAN *RESPIRATORY* *SYNCYTIAL* *VIRUS* RSV IS ASSOCIATED WITH A SIGNIFICANT REDUCTION IN PULMONARY RSV REPLICATION
AUTHOR: NICHOLAS J A; RUBINO K L; LEVELY M E; MEYER A L; COLLINS P L
AUTHOR ADDRESS: DEP. INFECTIOUS DISEASE, UPJOHN LAB., KALAMAZOO, MICH. 49007.
JOURNAL: VIROLOGY 182 (2). 1991. 664-672. 1991
FULL JOURNAL NAME: Virology
CODEN: VIRLA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

CYTOTOXIC T CELL ACTIVITY AGAINST THE 22-KDA PROTEIN OF HUMAN *RESPIRATORY* *SYNCYTIAL* *VIRUS* RSV IS ASSOCIATED WITH A SIGNIFICANT REDUCTION IN PULMONARY RSV REPLICATION

ABSTRACT: Recombinant vaccinia viruses expressing the *RSV* *F* glycoprotein (Vac-F), or a previously described chimeric protein consisting of the extracellular domains of the F and G glycoproteins (Vac-FG), or the 22...
...or B, depending on the immunization and challenge conditions, and induced a potent CTL response in the apparent absence of a significant humoral response. These *vectors* fortuitously allowed us to evaluate the contribution of a protein-specific memory CTL response to subgroup-specific and subgroup-cross-reactive reductions in pulmonary RSV ...
DESCRIPTORS: MOUSE RECOMBINANT VACCINIA VIRUS *VECTOR* F GLYCOPROTEIN G GLYCOPROTEIN SUBGROUP SPECIFICITY HUMOR IMMUNITY REQUIREMENT GENETIC ENGINEERING *VACCINE* BIOTECHNOLOGY

11/3,K/24 (Item 12 from file: 5)

96845102 BIOSIS NO.: [redacted]89004294

CHARACTERIZATION OF A NOVEL HUMAN *RESPIRATORY* *SYNCYTIAL* *VIRUS* CHIMERIC FG GLYCOPROTEIN EXPRESSED USING A BACULOVIRUS *VECTOR*

AUTHOR: WATHEN M W; BRIDEAU R J; THOMSEN D R; MURPHY B R
AUTHOR ADDRESS: UPJOHN COMP., 301 HENRIETTA ST., KALAMAZOO, MICH. 49001.
JOURNAL: J GEN VIROL 70 (10). 1989. 2625-2636. 1989
FULL JOURNAL NAME: Journal of General Virology
CODEN: JGVIA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

CHARACTERIZATION OF A NOVEL HUMAN *RESPIRATORY* *SYNCYTIAL* *VIRUS* CHIMERIC FG GLYCOPROTEIN EXPRESSED USING A BACULOVIRUS *VECTOR*

ABSTRACT: Human *respiratory* *syncytial* *virus* (RSV) codes for two glycoproteins (F and G) which have been shown to be the major targets for the host antibody response. We have expressed a novel chimeric glycoprotein (FG) in insect cells using a baculovirus *vector*. The chimeric glycoprotein contains the signal and extracellular regions of the *RSV* *F* glycoprotein linked to the extracellular region of the RSV G glycoprotein. Beginning at the amino terminus, the chimeric glycoprotein consists of amino acids 1 to 489 from *RSV* *F* followed by amino acids 97 to 279 from RSV G. The chimeric FG glycoprotein did not contain an anchor region and was efficiently secreted into...

...The cleavage site present on the F glycoprotein was recognized on the chimeric FG, and the glycoprotein appeared to be antigenically similar to the native *RSV* *F* and G glycoproteins.
DESCRIPTORS: INSECT CELLS GENETIC ENGINEERING *VACCINE* BIOTECHNOLOGY FUSION PROTEIN ATTACHMENT PROTEIN SIZE CHARGE HETEROGENEITY ANTIGENIC PROPERTIES

11/3,K/25 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

10975843 EMBASE No: 20010005417

***Respiratory* *syncytial* *virus* infection of gene gun vaccinated mice induces Th2-driven pulmonary eosinophilia even in the absence of sensitisation to the fusion (F) or attachment (G) protein**

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***Respiratory* *syncytial* *virus* infection of gene gun vaccinated mice induces Th2-driven pulmonary eosinophilia even in the absence of sensitisation to the fusion (F) or attachment (G) protein**

Complete protection against *respiratory* *syncytial* *virus* (RSV) infection was induced in mice vaccinated on two occasions with 2.5 mug of DNA, encoding the fusion (*F*) *protein* of RSV, precipitated onto gold microbeads. In contrast, immunisation with DNA encoding the attachment (G) protein of RSV resulted in a significant reduction in viral...
DRUG DESCRIPTORS:
**respiratory* *syncytial* *virus* *vaccine*--drug development--dv; *
respiratory *syncytial* *virus* *vaccine*--drug therapy--dt; *
respiratory *syncytial* *virus* *vaccine*--pharmacology--pd; *DNA

vaccine--drug developm[redacted]--dv; *DNA *vaccine*--drug the[redacted]y--dt; *DNA *vaccine*--pharmacology--pd
MEDICAL DESCRIPTORS:
gene gun; Th2 cell; Loeffler pneumonia; sensitization; immunoprophylaxis; protein expression; immunoprecipitation; virus inhibition; virus load; drug delivery system; immunoreactivity; cellular immunity; immunomodulation; plasmid *vector*; lung lavage; lung alveolus cell; inflammatory cell; T lymphocyte; lymphocyte proliferation; eosinophilia; nonhuman; mouse; animal experiment; animal model; controlled study; animal tissue; article; priority journal

11/3,K/26 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE
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03414767 EMBASE No: 1987157344
Progress towards control of the acute respiratory viral diseases of childhood
Pringle C.R.
Department of Biological Sciences, University of Warwick, Warwick, Coventry CV4 7AL United Kingdom
Bulletin of the World Health Organization (BULL. WHO) (Switzerland) 1987, 65/2 (133-137)
CODEN: BWHOA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH

...and childhood are caused by viruses of the Paramyxoviridae family, in particular measles virus, respiratory syncytial (RS) virus and parainfluenzavirus type 3 (PI3). Effective measles *vaccine* was developed by classical methods, but these same methods have failed to provide *vaccines* to control RS and PI3 virus infections. The WHO Programme for *Vaccine* Development was initiated in 1983 to encourage the application of the new biotechnologies to continuing problems, such as the acute virus-induced respiratory diseases of...
...was expressed concerning the prospects for immunoprophylaxis of RS virus-induced disease. Animal models are now available for evaluation of the immunogenic potential of candidate *vaccines*. Vaccinia/RS recombinant viruses have been produced which have allowed the immunogenic properties of individual RS virus proteins to be defined. Complete protection without the exacerbation of disease, which earlier had accompanied the use of formalin-inactivated *vaccines*, has been achieved in animals immunized with vaccinia virus recombinants expressing the *F* *protein*; partial protection was obtained using G protein gene *vectors*. PI3 appears to be an inherently stable virus and evidence from animal experiments suggests that bovine PI3 might be suitable for use as a live *vaccine* in man.
DRUG DESCRIPTORS:
*measles *vaccine*; **respiratory* *syncytial* *virus* *vaccine*
DRUG TERMS (UNCONTROLLED): parainfluenza *vaccine*

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03316647 EMBASE No: 1987069224
Expression of the fusion protein of human *respiratory* *syncytial* *virus* from recombinant vaccinia virus *vectors* and protection of vaccinated mice
Werts G.W.; Stott E.J.; Young K.K.Y.; et al.
University of North Carolina, Chapel Hill, NC 27514 United States
Journal of Virology (J. VIROL.) (United States) 1987, 61/2 (293-301)
CODEN: JOVIA
DOCUMENT TYPE: Journal
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